

TURBINE ROTOR HEAT TREATMENT PROCESS

Abstract

A method of heat treating a turbine rotor disk to obtain different radial properties at different locations in the rotor disk includes a) heating the rotor disk for a period of from 4 to 10 hours at a temperature of 1800°F; b) cooling the rotor disk to a temperature of about 1550°F; c) holding the rotor disk at about 1550°F for a period of from about 2 to about 4 hours; d) cooling the rotor disk to room temperature; e) precipitation aging the rotor disk by heating the rotor disk to temperature of 1325°F for 8 hours, holding it at 1150°F for 8 hours, and f) cooling the rotor disk.